

**I-81 Improvement Project**  
***From the West Virginia State Line to the Pennsylvania State Line***

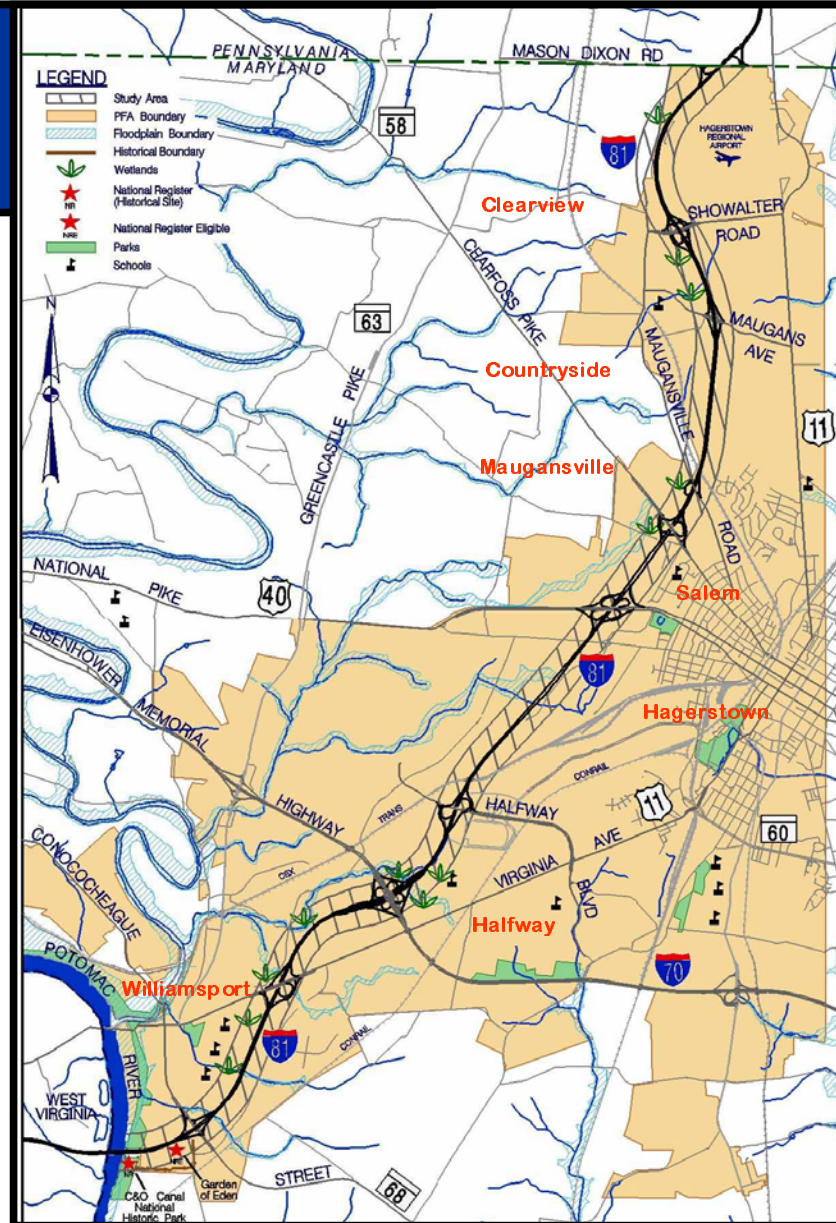
**Presentation  
of  
Alternates Retained for Detailed Study**

*September 23, 2004*

*I-81 Corridor Multi-State Meeting*



# Location Map



***I-81 Improvement Project***  
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# Purpose & Need

## PURPOSE

**To improve traffic operations and safety along I-81 from the West Virginia State Line to the Pennsylvania State Line.**

## NEED

- I-81 serves as a major regional highway and links Maryland, Pennsylvania, Virginia, and West Virginia.
- Major increases in economic development are projected in the future.
- There are merging problems at interchanges, resulting in a high number of crashes along the 12-mile corridor.
- 34% of the vehicles using I-81 through Maryland are trucks, representing one of the highest rates in the state.
- Pennsylvania and West Virginia are both studying the widening of I-81.

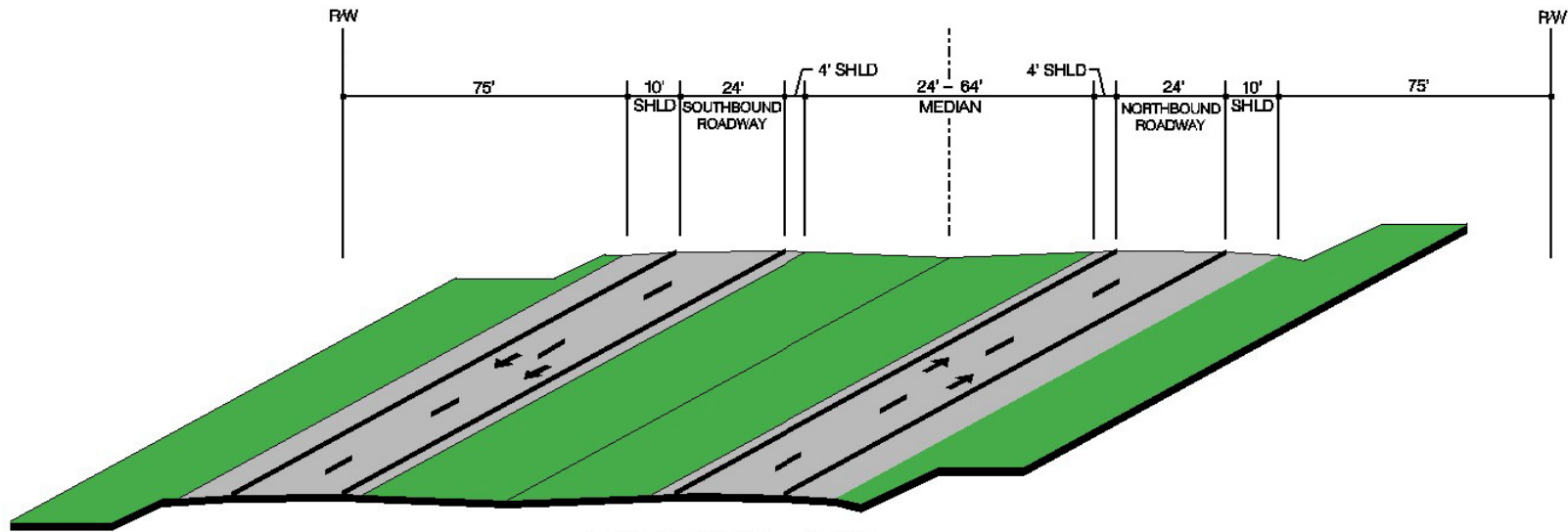
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# ***Background***

- Improvements to I-81 were recommended in the North-South (N-S) Corridor Study
- Project Initiation – July 2001
- Informational Public Workshops – November 2001 & May 2004
- Alternates Public Workshop – June 2000

# Existing Roadway Sections

- I-81 is a four-lane divided roadway with two 12-foot lanes in each direction with 4-foot inside shoulders, 10-foot outside shoulders, and a variable (24'-64') grass median

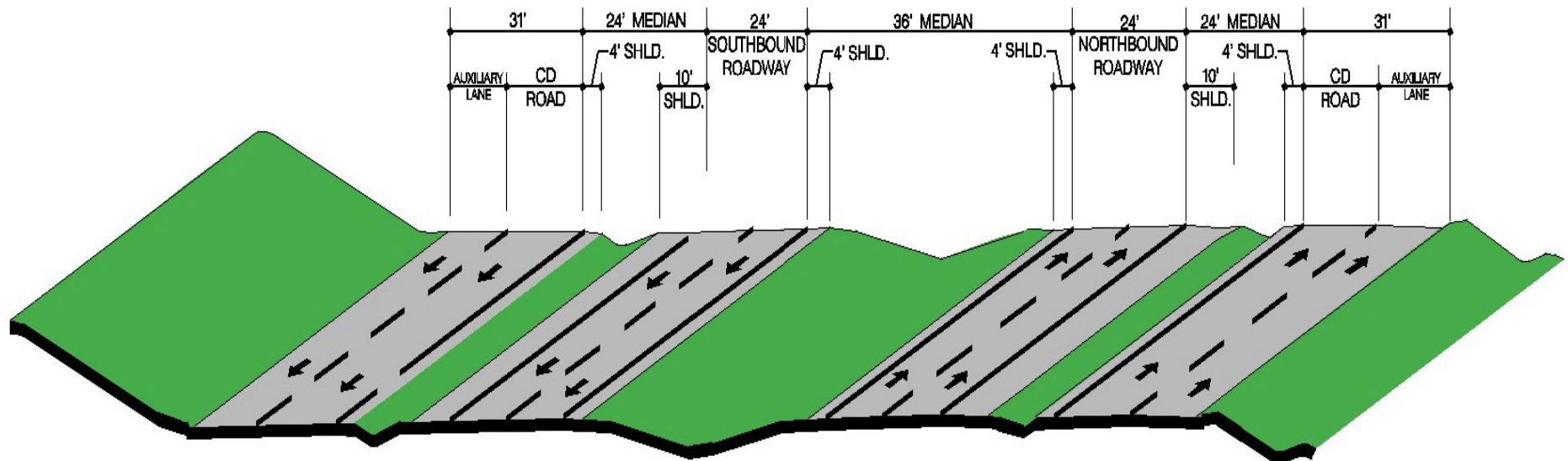


*EXISTING I-81  
TYPICAL SECTION  
(EXCLUSIVE OF I-70 INTERCHANGE)*

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# Existing Roadway Sections

- A two-lane collector/distributor roadway exists through the I-70 interchange



*EXISTING I-81 AT I-70  
TYPICAL SECTION*

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# Previous Alternates Retained for Detailed Study

- Alternate 1 - No Build
- Alternate 2 - Interchange Improvements
- Alternate 2A - Interchange Improvements w/Shortened & Modified Collector-Distributor (C-D) Road
- Alternate 3 - Inside Widening
- Alternate 3A - Inside Widening w/Collector-Distributor Road
  - Option A
  - Option B

# Alternate 1 - No Build

- Routine Maintenance and Safety Improvements
- No Major Improvements

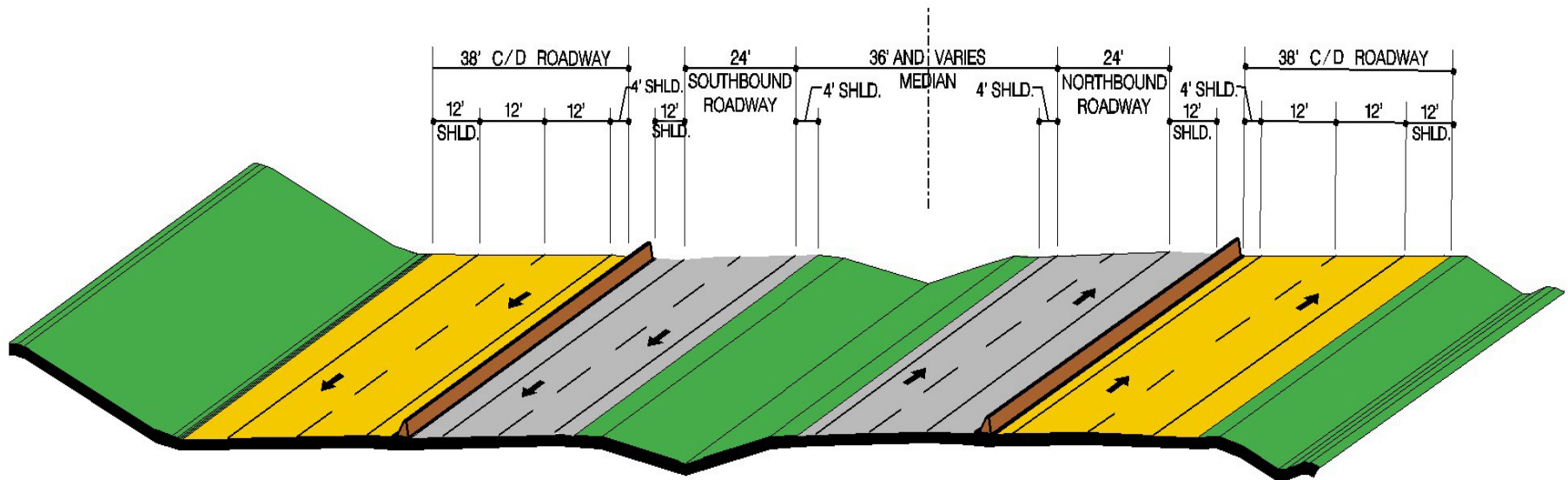


## Alternate 2 - Interchange Improvements

- Mainline remains as four lanes
- Provide adequate acceleration/deceleration lanes and shoulders
- Upgrade the following interchanges:
  - MD 68
  - US 11
  - I-70
  - US 40
  - Maugansville Rd
  - Maugans Ave
  - Showalter Rd

# Alternate 2A – Interchange Improvements w/Shortened & Modified C-D Road

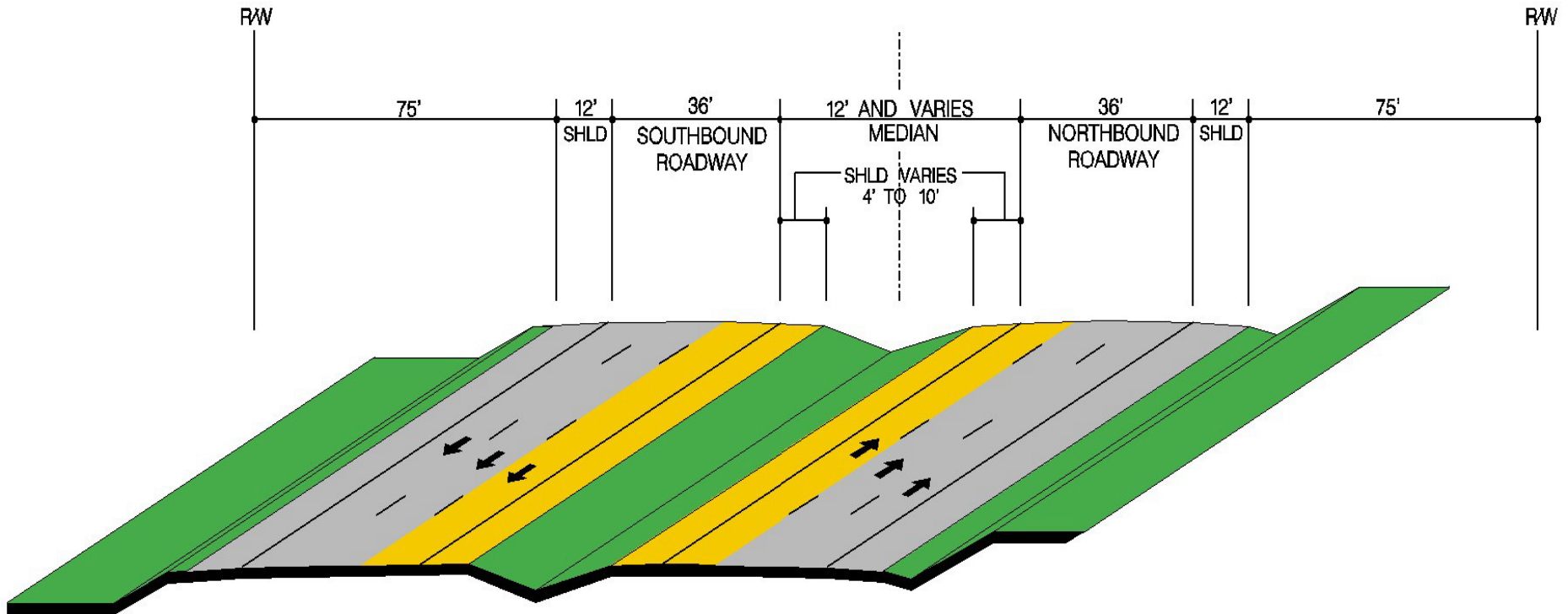
- Mainline remains as four lanes
- A 2-lane collector distributor road would be constructed from I-70 to Halfway Boulevard
- Provide 12-foot outside shoulders along mainline I-81
- Interchange Improvements would be included



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## Alternate 3 - Inside Widening

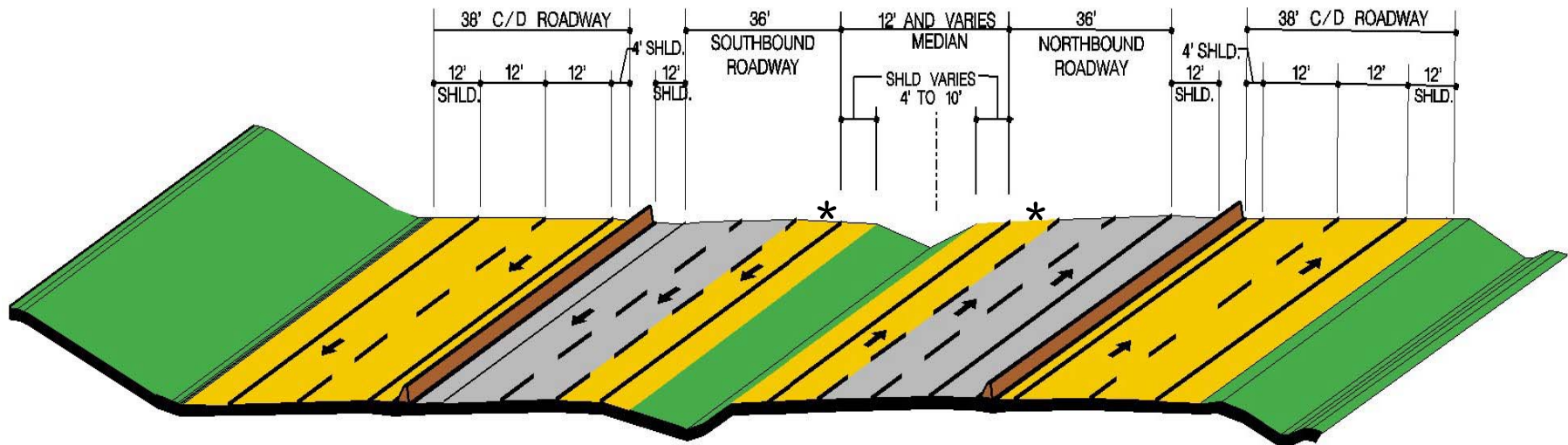
- Add a 12-foot lane and a variable (4'-10') shoulder on the inside of the existing roadway towards the median
- Provide 12-foot outside shoulders along mainline I-81
- Interchange improvements would be included



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# Alternate 3A - Inside Widening w/ C-D Roads

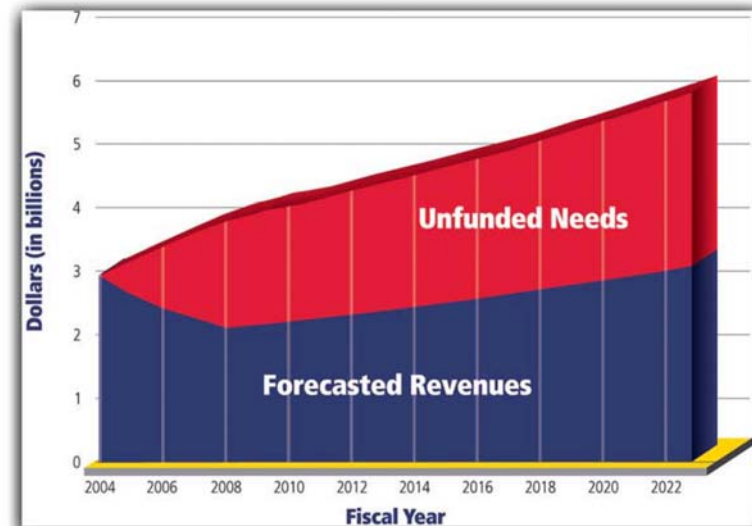
- Add a 12-foot lane, a 12-foot outside shoulder, and a variable (4'-10') inside shoulder on the inside of the existing roadway towards the median
- A 2-lane collector distributor road would be constructed from I-70 to Halfway Boulevard
- Interchange Improvements would be included
- **Option B: I-81 would remain 2-lanes through the C-D road section**



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# Why Consider Tolls?

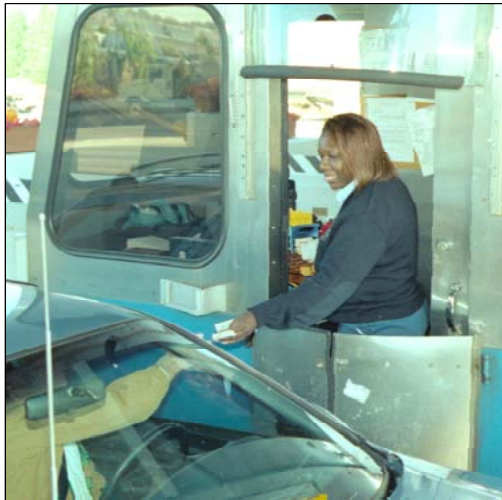
- The State is facing severe resource and fiscal constraints
- Tolls could fund project construction and maintenance work
- The construction would be funded sooner
- Help manage traffic flow



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# Toll Collection Methods

## Cash Toll Collection



*Baltimore Harbor Tunnel*

- Traditional
- Open to All Users
- Vehicles Must Stop to Pay

## Electronic Toll Collection (ETC)



*William Preston Lane Jr. Memorial Bridge*

- Requires Transponder (E-ZPass™)
- Open to Users with Transponders
- Enables Toll Collection at Speeds up to 70 mph

## Combined Cash/Highway Speed (ETC)



*Mon Fayette Expressway, PA*

- Combined Cash & ETC Provides Flexible Operation
- Open to All Users
- Improved Throughput for vehicles with E-ZPass
- Enables Toll Collection at Speeds up to 70 mph

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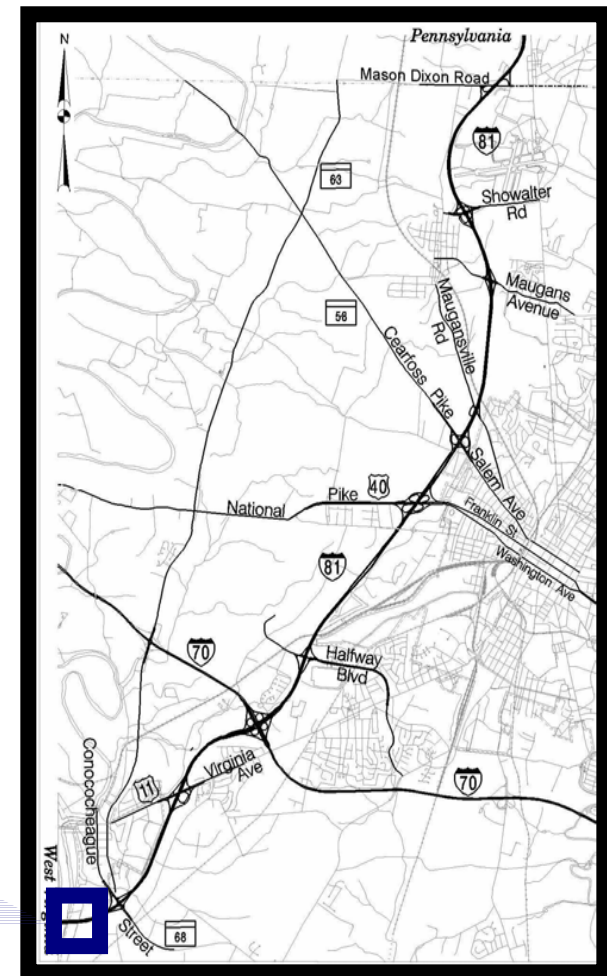
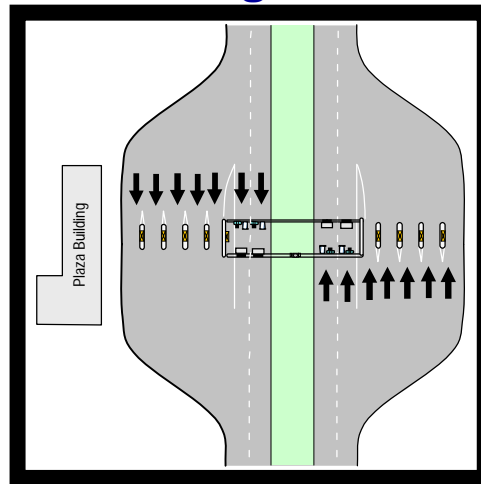


## Options Added to the Alternates Retained for Detailed Study

- Toll Option 1 – North & Southbound Tolls near the West Virginia (WV) State Line Entering & Exiting the State
- Toll Option 2 – North & Southbound Tolls near the WV & Pennsylvania State Line Entering the State
- Toll Option 3 – North & Southbound Tolls near the WV & Pennsylvania State Line Exiting the State
- Toll Option 4 – North & Southbound Tolls near the WV & Pennsylvania State Line Entering & Exiting the State
- Truck Weigh Station Option

# Toll Option 1

- Dual toll plaza between the Potomac River and Conococheague Street
- Through toll area, a combination of high-speed electronic toll lanes and cash/electronic toll lanes would be provided in each direction
- Drivers would be tolled as they **enter and exit** Maryland at the West Virginia state line

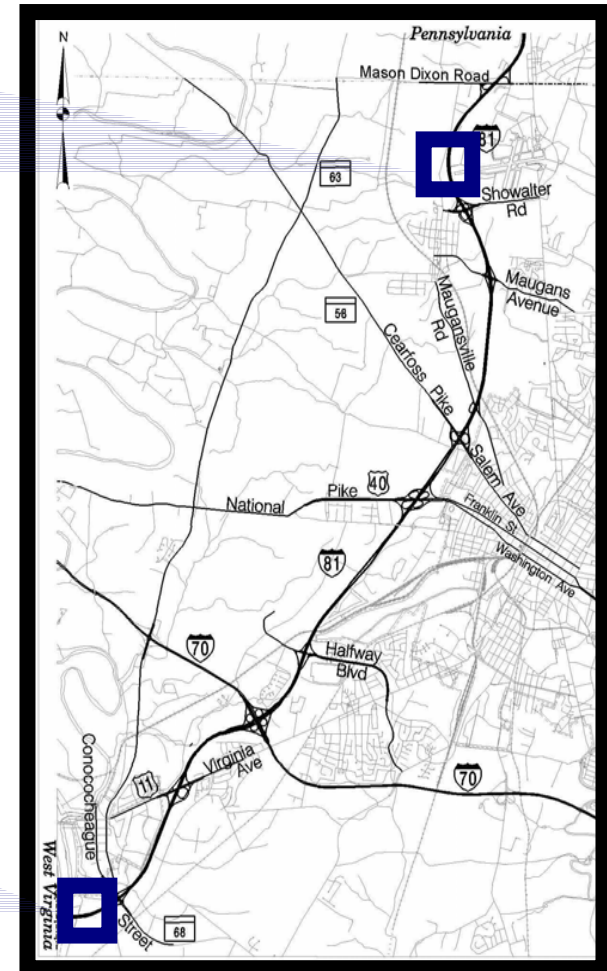
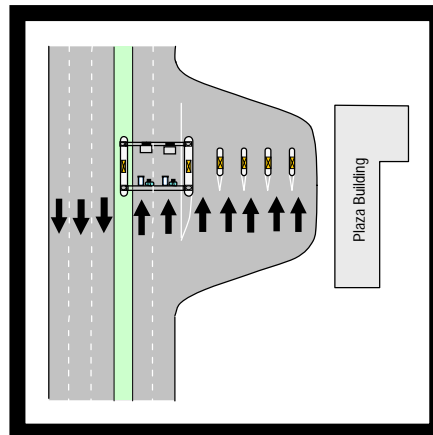
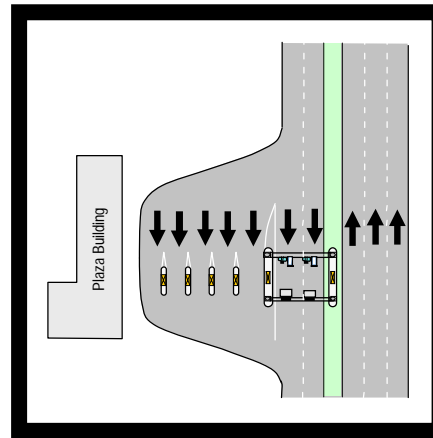


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# Toll Option 2

- Toll plaza along NB I-81 between the Potomac River and Conococheague Street; toll plaza along SB I-81 between Showalter Rd and Mason Dixon Rd
- Through toll areas, a combination of high-speed electronic toll lanes and cash/electronic toll lanes would be provided
- Drivers would be tolled as they **enter** Maryland at the Pennsylvania and West Virginia state lines

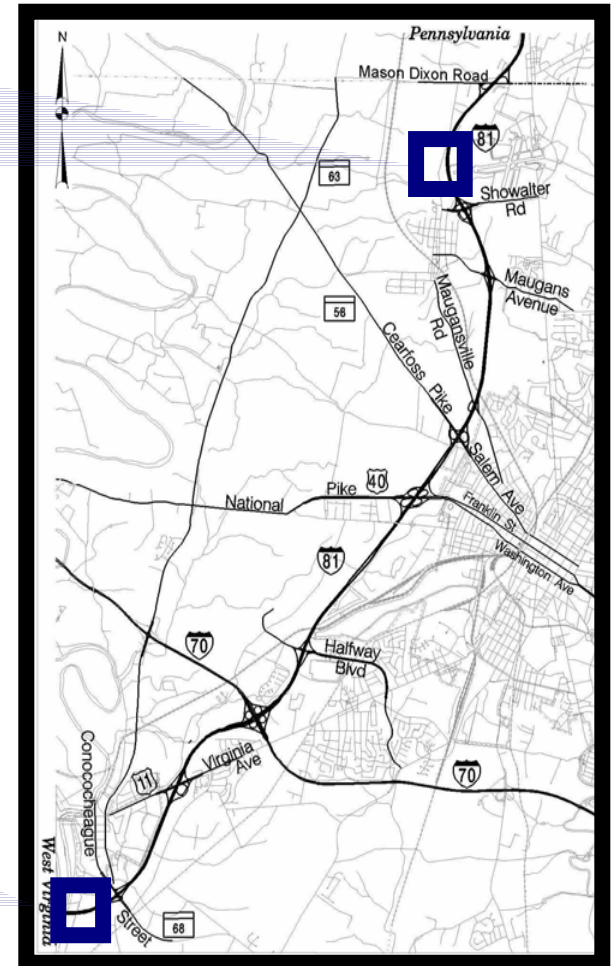
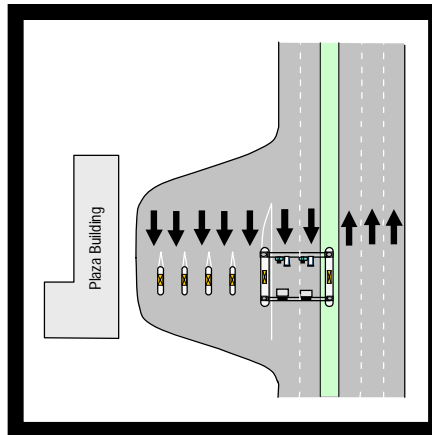
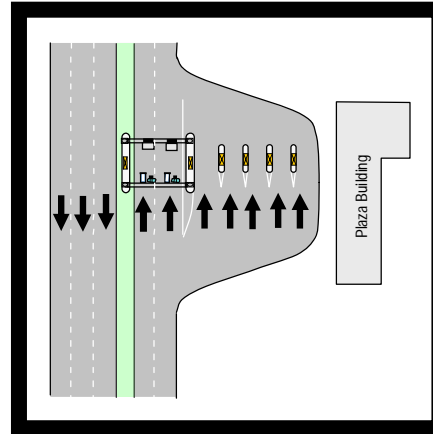


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# Toll Option 3

- Toll plaza along SB I-81 between the Potomac River and Conococheague Street; toll plaza along NB I-81 between Showalter Rd and Mason Dixon Rd
- Through toll areas, a combination of high-speed electronic toll lanes and cash/electronic toll lanes would be provided
- Drivers would be tolled as they **exit** Maryland at the Pennsylvania and West Virginia state lines

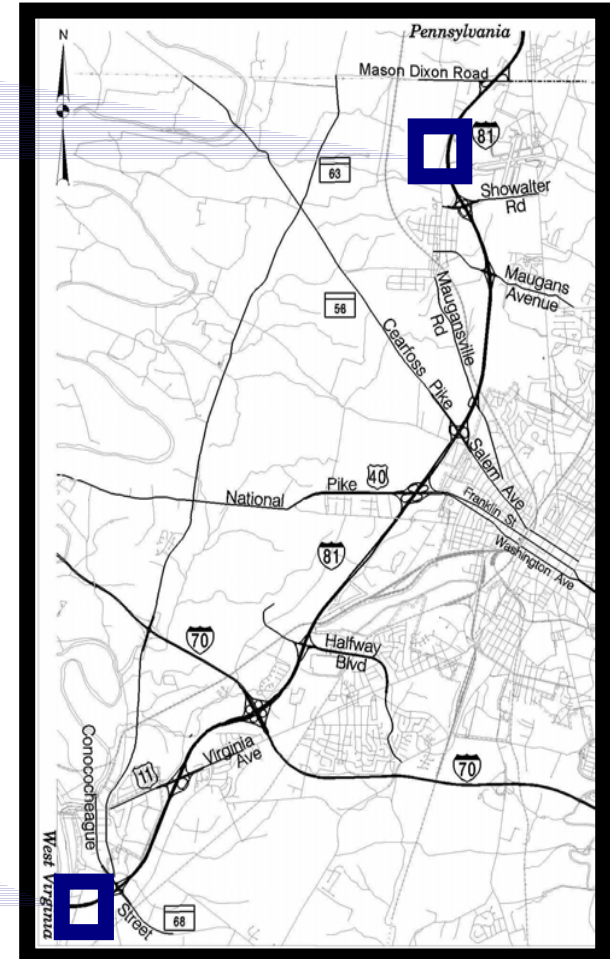
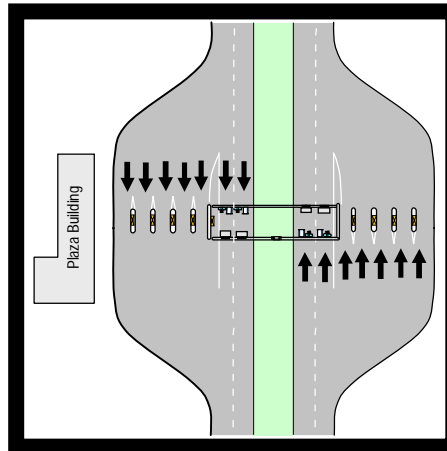
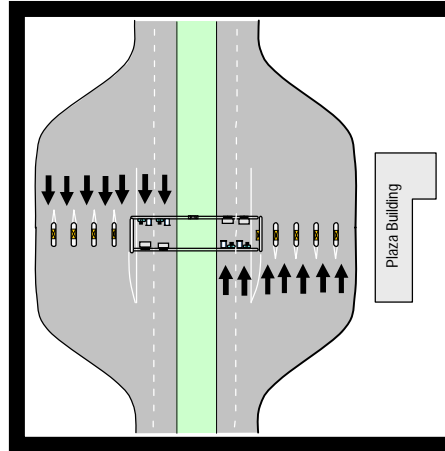


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# Toll Option 4

- Dual toll plazas between the Potomac River and Conococheague St and between Showalter Rd and Mason Dixon Road
- Through toll areas, a combination of high-speed electronic toll lanes and cash/electronic toll lanes would be provided in each direction
- Drivers would be tolled as they **enter and exit** Maryland at the Pennsylvania and West Virginia state lines

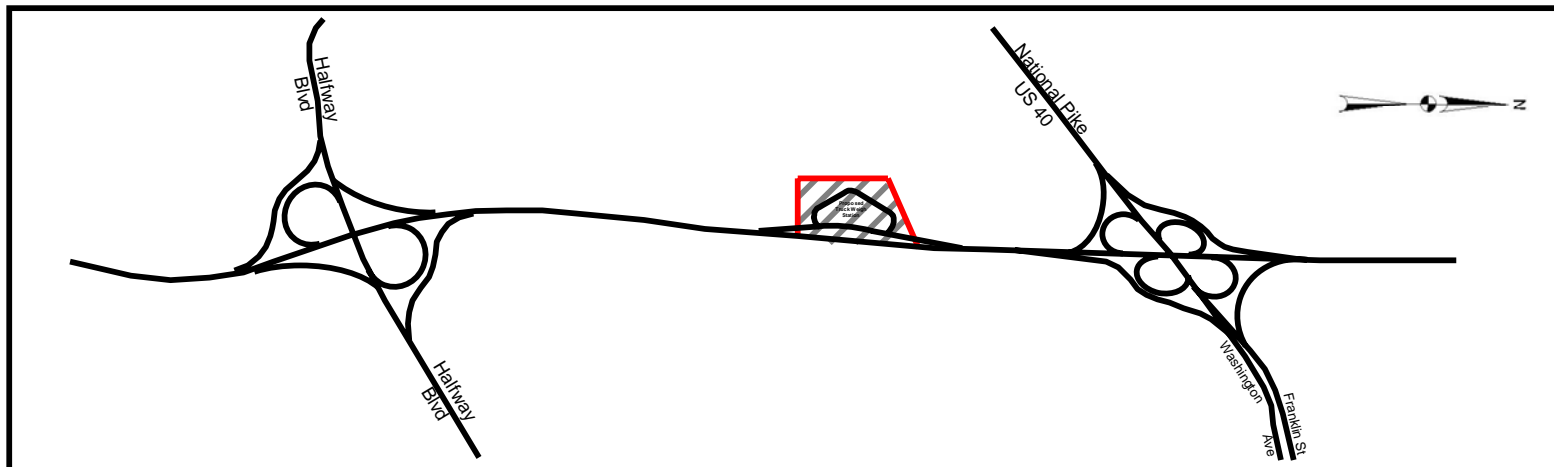


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# Truck Weigh Station

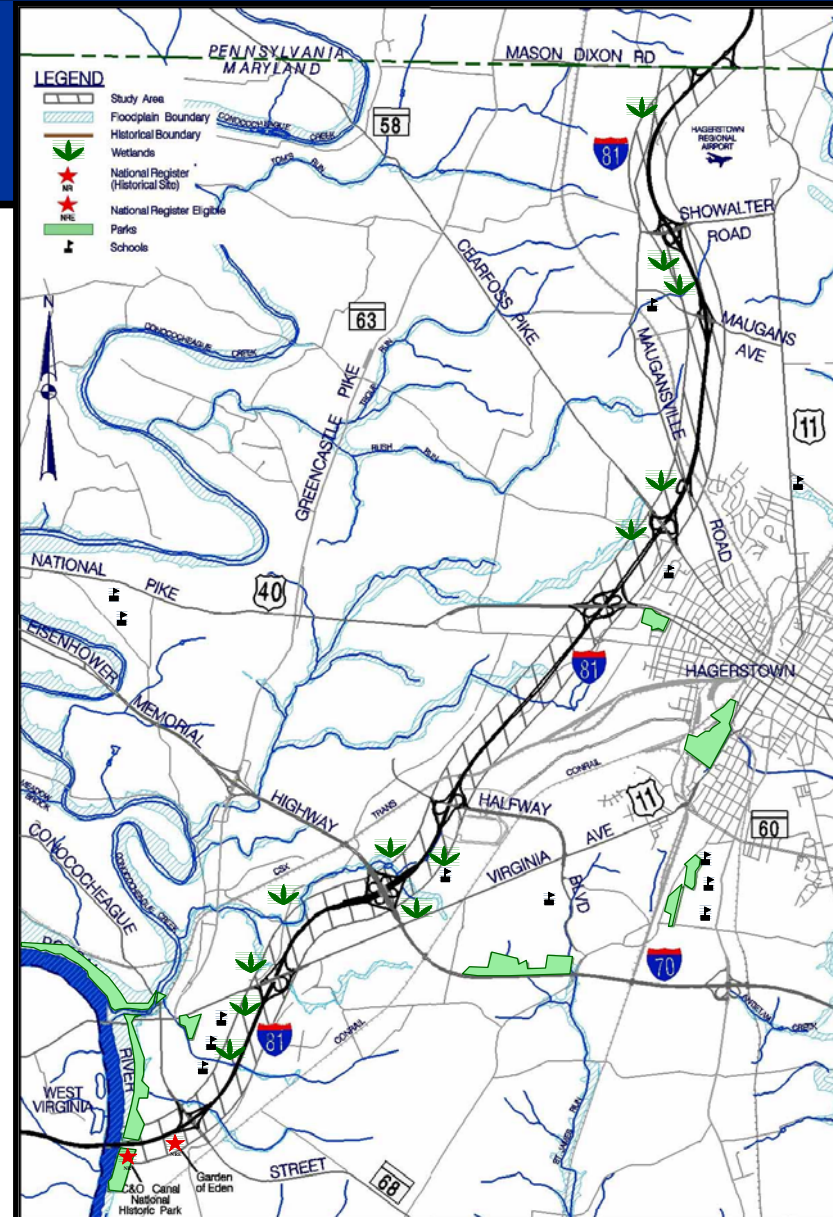
- 12-mile segment of I-81 in Maryland and 26-mile segment of I-81 in West Virginia do not have any weigh stations. The two states in conjunction with the Federal Motor Carrier Safety Administration and the Federal Highway Administration are exploring options for a cooperative weigh station.
- Coordination is underway with West Virginia to facilitate a truck weigh station along northbound I-81.
- A truck weigh station is proposed on a 10-acre site along the southbound side of I-81 between Halfway Boulevard and US 40.



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# Environmental Overview

- Historical Properties:
  - C&O Canal National Historic Park
  - Garden of Eden
- Wetlands
- Schools
- Parks



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# Summary of Impacts & Estimated Costs for Recommended Alternates

RESOURCES	ALTERNATE						TOLL OPTION				WEIGH STATION
	1	2	2A	3	3A	3A, Option B	1	2	3	4	
	No-Build	Interchange Improvements	Interchange Improvements w/ Collector- Distributor Roads	Inside Widening	Inside Widening w/ Collector- Distributor Roads	Two Lane I-81 Mainline Parallel to the Collector- Distributor Road	Dual Toll Plaza btwn. Potomac River and Conococheague Street	Toll Plazas at North and South ends of I- 81, tolling drivers entering MD	Toll Plazas at North and South ends of I-81, tolling drivers exiting MD	Dual Toll Plazas at North and South ends of I-81	SB I-81 between Halfway Blvd and US 40
<b>Socio-Economic Environment</b>											
1 Displacements											
a. Residential	0	0	0	0	0	0	0	0	0	0	0
b. Business/Commercial	0	2	2	2	2	2	0	0	0	0	0
<b>TOTAL DISPLACEMENTS</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2 No. of Properties & Resources Affected											
a. Residential	0	14	16	15	18	18	2	4	3	7	1
b. Business/Commercial	0	12	17	12	17	17	0	1	2	3	0
c. Parkland/Recreation Area	0	0	0	1 *	1 *	1 *	0	0	0	0	0
d. Church/School	0	0	0	0	0	0	0	0	0	0	0
e. Historical/Archaeological	0	0	0	1 *	1 *	1 *	1	1	0	1	0
<b>TOTAL PROPERTIES</b>	<b>0</b>	<b>26</b>	<b>33</b>	<b>28 *</b>	<b>36 *</b>	<b>36 *</b>	<b>3</b>	<b>6</b>	<b>5</b>	<b>11</b>	<b>1</b>
3 Right-of-Way Required - Acres											
a. Residential	0	6.70	8.95	6.80	9.30	7.70	5.28	5.08	5.36	10.44	11
b. Business/Commercial	0	9.40	18.20	9.40	18.50	18.30	0	1.31	3.93	3.24	0
c. Parkland/Recreation Area	0	0	0	1.20 *	1.20 *	1.20 *	0	0	0	0	0
d. Church/School	0	0	0	0	0	0	0	0	0	0	0
e. Historical/Archaeological	0	0	0	1.20 *	1.20 *	1.20 *	2.47	4.39	0	2.47	0
<b>TOTAL ACRES</b>	<b>0</b>	<b>16.10</b>	<b>27.15</b>	<b>17.40 *</b>	<b>29.00 *</b>	<b>27.20 *</b>	<b>7.75</b>	<b>10.78</b>	<b>9.29</b>	<b>16.15</b>	<b>11</b>
<b>Natural Environment</b>											
1 Number of Stream Crossings	0	16	16	20	20	19	0	0	0	0	0
2 Linear Feet of Stream (Total)	0	6,254	7,186	8,239	9,953	9,149	0	0	50	50	0
Perennial	0	1,892	2,420	3,517	4,348	4,348	0	0	50	50	0
Intermittent	0	302	1,590	652	1,906	1,906	0	0	0	0	0
Ephemeral/Intermittent	0	3,177	2,372	3,187	2,895	2,895	0	0	0	0	0
Ephemeral	0	883	804	883	804	0	0	0	0	0	0
3 100-Year Floodplain Affected (acres)	0	2.00	4.00	2.10	4.00	4.00	0	0	0	0	0
4 Wetlands Affected (acres)	0	1.00	1.00	1.00	1.00	1.00	0	0	0	0	0
5 Woodlands Affected (acres)	0	7.00	15.00	7.00	16.00	16.00	6.86	4.08	4.70	6.86	11
6 Area of Prime Farmland Affected (acres)	0	4.00	9.00	4.00	11.00	11.00	0.11	5.19	0.07	5.25	0
7 Agricultural Land Affected (acres)	0	4.00	9.00	4.00	11.00	11.00	0.11	5.19	0.07	5.25	0
8 Urban or Built-Up Land (acres)	0	6.00	6.00	6.00	6.00	6.00	0	0	0	0	0
<b>Cost</b>											
<b>Preliminary Engineering</b>	\$0	\$30-\$35	\$40-\$45	\$55-\$60	\$60-\$65	\$60-\$65	\$5-\$10	\$5-\$10	\$5-\$10	\$5-\$10	\$1-\$5
<b>Right-of-Way</b>	\$0	\$10-\$15	\$15-\$20	\$10-\$15	\$20-\$25	\$20-\$25	\$5-\$10	\$5-\$10	\$5-\$10	\$5-\$10	\$5-\$10
<b>Construction</b>	\$0	\$190-\$195	\$240-\$245	\$350-\$355	\$400-\$405	\$400-\$405	\$25-\$30	\$30-\$35	\$30-\$35	\$40-\$45	\$10-\$15
<b>Total</b>	<b>\$0</b>	<b>\$230-\$235</b>	<b>\$295-\$300</b>	<b>\$415-\$420</b>	<b>\$480-\$485</b>	<b>\$480-\$485</b>	<b>\$35-\$40</b>	<b>\$40-\$45</b>	<b>\$40-\$45</b>	<b>\$50-\$55</b>	<b>\$16-\$30</b>

\* A temporary construction easement would be needed from the Chesapeake and Ohio Canal NHP. The Chesapeake and Ohio Canal NHP is considered both a parkland and a historic site, and therefore, it is included in both.

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# Key Issues

- **Coordination with Pennsylvania and West Virginia in the development of the alternates**
- **Hagerstown Regional Airport is planning on runway extension**
- **Maugans Avenue improvements by Washington County**
- **Coordination with the Chesapeake & Ohio Canal National Historical Park**

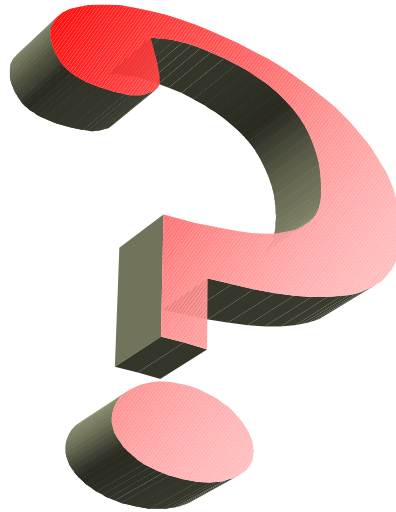
## Next Steps

- Hold Location/Design Public Hearing - **Fall 2004**
- Receive Location/Design Approval - **Fall 2005**

→ *Funded for Project Planning Only*



# Questions



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